

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-22 are pending. Claims 1, 4 and 14 are independent. Claims 1, 4-6, 11, 13, 14 and 20-22 are amended. Reconsideration of this application, as amended, is respectfully requested.

Objection to the Claims

Claims 5, 6, 10, 12 and 13 are objected to because of minor informalities. Claims 5, 6, 10, 12 and 13 are amended in accordance with the Examiner's helpful comments. Accordingly, withdrawal of the objection to these claims is respectfully requested.

Rejection under 35 U.S.C. §112, 2nd paragraph

Claims 1-22 are rejected under 35 U.S.C. §112, 2nd paragraph, for being indefinite. The claims are amended in accordance with the Examiner's helpful comments. It is respectfully submitted that all claims comply with the requirements of 35 U.S.C. §112, 2nd paragraph. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, 2nd paragraph, is respectfully requested.

Rejection under 35 U.S.C. §102(b)

Claims 1-3, 7-9 and 14 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,664,636 to Ikuma et al. Claim 4 is rejected under 35 U.S.C. §102(b) as

being anticipated by U.S. Patent No. 5,819,867 to Matsumoto et al. This rejection is respectfully traversed.

Claims 5, 6, 10-13 and 15-22 are indicated as containing allowable subject matter. Applicants thank the Examiner for the indication of allowable subject matter. However, claims 5, 6, 10-13 and 15-22 are not rewritten in independent form at this time because it is believed that the independent claims from which these claims depend are allowable over the applied prior art of record.

While not conceding the appropriateness of the rejection, but merely to advance prosecution of the instant application, independent claim 1 is amended to recite a combination of elements in a control unit for a motor-assisted vehicle, including "means for controlling and generating an assist drive force corresponding to the actual running resistance of said vehicle."

Independent claim 4 is amended to recite a combination of elements in a control unit for a motor-assisted vehicle, including "means for detecting an actual running resistance of a vehicle; means for generating an assist drive force corresponding to the actual running resistance; and means for detecting and calculating an acceleration of said vehicle; wherein said means for generating the assist drive force increases the assist drive force generated by said motor drive system in accordance with the acceleration after a predetermined value of time."

Independent claim 14 is amended to recite a combination of elements in a control unit for a motor-assisted vehicle, including “means for controlling and generating an a first assist drive force corresponding to the actual running resistance of said vehicle.”

It is respectfully submit that the combinations of elements set forth in amended independent claims 1, 4 and 14 are not disclosed or made obvious by the prior art of record, including Ikuma et al. and Matsumoto et al.

Ikuma et al. discloses an interconnection of the manual and electric power assist to the driven rear wheel of a bicycle which includes an electric motor 36, a control unit 44, a pedal force detection mechanism 46 and a vehicle speed sensor 47, as shown in Figure 2. The pedal force detection mechanism 46 outputs a signal to the control unit 44 of the force F exerted by a rider on pedals 29. The vehicle speed sensor 47 also sends a signal S to the motor. However, nowhere does Ikuma et al. mention an “actual running resistance” of a vehicle, as claimed in the present invention. Moreover, the force F detected by the pedal force detection mechanism 46 is very different the “actual running resistance” of the vehicle. Ikuma et al. does not teach or suggest “means for controlling and generating an assist drive force corresponding to the actual running resistance of said vehicle,” as recited in claim 1. Moreover, Ikuma et al. does not teach or suggest “means for controlling and generating an a first assist drive force corresponding to the actual running resistance of said vehicle,” as recited in claim 14.

Matsumoto et al. discloses a driving system of an electrically powered bicycle which includes a microcomputer 17 which carries out a signal processing on receipt of an output sensor from a speed sensor 14c and sends a duty control signal to a pulse generator 18c, as shown in Fig. 3. However, nowhere does Matsumoto et al. mention an "actual running resistance" of a vehicle, as claimed in the present invention. Matsumoto et al. fails to teach or suggest "means for detecting an actual running resistance of a vehicle," "means for generating an assist drive force corresponding to the actual running resistance," and "means for detecting and calculating an acceleration of said vehicle; wherein said means for generating the assist drive force increases the assist drive force generated by said motor drive system in accordance with the acceleration after a predetermined value of time," as recited in claim 4.

In view of the foregoing, it is respectfully submitted that the combinations of elements set forth in amended claims 1, 4, and 14 are not disclosed or made obvious by the prior art of record, including Ikuma et al. and Matsumoto et al. Since the dependent claims depend from allowable independent claims, the dependent claims are also allowable for at least the reasons set forth above, as well as the additional limitations set forth therein. Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) and allowance of all claims are respectfully requested.

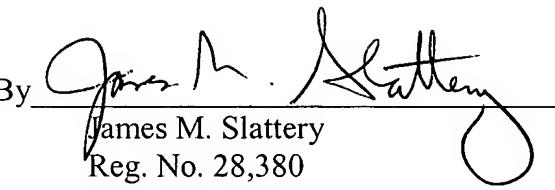
CONCLUSION

All the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

However, if there are any outstanding issues, the Examiner is invited to telephone Sam Bhattacharya, Reg. No. 48,107, at 703-205-8000 in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,
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